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ABSTRACT

A telephone-based referral service is provided by NEXUS, an information system on postsecondary education with emphasis on educational reform and innovation. This report summarizes the development and activities of the project from July, 1974 to June, 1976, as supported by the Fund for the Improvement of Postsecondary Education. Described are: (1) the developmental stages of the project; (2) activities in establishing the information system, promoting its service, responding to information needs, financing the program, and dissemination; (3) internal and external program evaluation; and (4) conclusions about the system's impact. Quantitative data regarding the user and the service are included. (SC)

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NEXUS

Final Report to The Fund For The Improvement of Postsecondary Education

IR004395

NEXUS
Final Report to The Fund For The
Improvement of Postsecondary Education

October 29, 1976

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Introduction

NEXUS is about communication and development--who needs what information, how it's used, and at what price. This report is about all those things. This is our last report to the Fund for the Improvement of Postsecondary Education (hereafter referred to as the Fund). As such it summarizes NEXUS' development and activities during the period in which it was supported by the Fund, July 1, 1974 through June 30, 1976. This report does not repeat what has been described and accounted for in earlier reports. Rather, it provides a three year summary of the program, including, when appropriate, comments and recommendations on particular aspects of the program.

There are four major sections of this report:

1) Developmental states of the project: How did NEXUS change from a proposal to an operating entity? What are the differences between what was originally proposed and NEXUS today, and why have those differences arisen?

2) Progress toward objectives: This section builds on the work of the previous annual and semi-annual reports to the Fund. Utilizing the objectives detailed in the NEXUS planning paper (dated January 25, 1974), this section details activities related to each of NEXUS' objectives: establishing an information system; promoting the service; responding to questions; financing the program; and, developing auxiliary linking and dissemination mechanisms. Most of the extensive quantitative data gathered on the program are summarized in this section. The appendices of this report contain raw data for those interested in doing independent analyses.

3) Evaluation: NEXUS has been evaluated by outsiders twice. User questionnaires--NEXUS "Talkbacks"--have been sent to inquirers asking them to evaluate the service. This section summarizes the results of these evaluations and feedback efforts.

4) Conclusions: In this section, we draw some conclusions about NEXUS' impact and the people and environment which have shaped it.

This report is addressed to several audiences: the Fund's staff and board, the NEXUS Advisory Panel and AAHE Board of Directors, NEXUS network contributors and interested parties, and others who may be considering starting something similar to NEXUS. While these are groups with very different perspectives, it is assumed that they share some common interests. We hope that each individual finds this report useful.

DEVELOPMENTAL STAGES OF NEXUS

This section describes how NEXUS evolved from a nine page proposal funded by the Fund for three years at a level of $308,000, to a nationwide referral service which connects people with questions about postsecondary education with people who have answers. This section is divided into three parts: mission, organization, and staffing. It describes how an idea becomes a working reality, why certain shifts in program emphases were made, and what we learned from the three year experience that might be transferrable to other projects.

MISSION

The first mission statement from the AAHE proposal to the Fund describes NEXUS as:

> an agency specifically designed to refer innovators to resources and people to people through a cadre of practitioners who have access to the major resources of research and organizational backing and /who are/ key figures on the national educational scene.

NEXUS was seen as an agency which would respond to inquiries and requests for help by referring inquirers to individuals with knowledge or experience relevant to their concerns. The proposal clearly intended NEXUS to be a tool for educational reform, innovation, and improvement.

Why and how did NEXUS become a telephone referral service, open to anyone, on just about any subject in postsecondary education? The transition came within three months of when the first staff members were hired. The January 1974 NEXUS Planning Report states: "NEXUS will operate akin to a switchboard. Any individual who wants information about postsecondary education can call." While the original proposal envisioned the use of the telephone in conducting linkages, the proposed agency was less identified with the telephone, than with "innovators" and "innovation." In retrospect, NEXUS probably became a telephone-based referral service largely because of its director's experience with a clearinghouse which operated by mail. Several drawbacks were apparent with a mail operation:

-- people often did not explain their questions well enough in writing so that the recipient had enough information to answer them;

-- a written response, which had to be drafted, typed, and posted took a great deal more time (and, hence, money) than a telephone response;

-- people who called almost always got answers quicker than people who wrote;

-- a better understanding of people's needs could be elicited by posing questions, probing, and listening to people's responses, than from attempting to clarify needs and problems through an exchange of letters.

How did NEXUS become a general clearinghouse for all questions about higher education, not only "innovative" ones? Here, the role of the field-based Advisory

Panelists[1] as well as the experiences of staff members was important. The staff proposed that the project assume responsibility for six to eight areas during the first year. New areas would be added in subsequent years based on questions asked in other areas, but not answered. The Advisory Panel recommended instead that we begin by accepting all questions and listen for the first six months to what people in the field were interested in, in order to gauge what action to take about delimiting the areas of service.

Two and a half years after these initial decisions, our post-Fund-supported survival may depend, substantially, on those early, key decisions not to become too exclusive or tied to a relatively small constituency. Today, NEXUS has a very broad base of support from people who usually don't have access to traditional channels of information. Indeed, funders of NEXUS have reported that they relied as much on outsider's beliefs that NEXUS' work was of high quality as on any proposals or visits from the staff.

Did NEXUS do all that the original proposal outlined? No, it did not. The primary set of objectives was so ambitious that other proposed actions were given much less attention. For example, the proposal stated that NEXUS would:

> assess the need for new publications or other informational media, experiment with prototypes of such as are deemed valuable, facilitate the development of regional information networks, explore other means (such as workshops) for passing on knowledge of successful educational practices.

While NEXUS did develop its own newsletter, and found creative ways to link people attending conferences with other conferees in order to discuss solutions to mutual problems, it did not take on the problems of information gaps and duplications in the many education journals and newsletters, nor did it run workshops, conferences, or set up regional networks.

NEXUS was established under the assumption that there was so much "innovation" under way that no one could keep track of it; thus, new innovators were reinventing the wheel, unnecessarily. To be sure, there was considerable commotion in postsecondary education when NEXUS began. But, it could be argued that only a small fraction of it represented <u>significant</u> changes in education and educational institutions. And, to a certain extent we subscribe to this. NEXUS has seen more than a little faddism reflected in its inquiries over the last three years.

However, there is a converse view, which we also hold. "Innovation" has come to be a code word, but it is also something that is relative. During a NEXUS Advisory Panel meeting the staff was asked whether a clearinghouse was necessary--was there really all that much "innovation" out there? Well, that depends on where you're sitting. Something as relatively common as a 4-1-4 calendar may be innovative for one institution and old hat for another.

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[1] NEXUS' Advisory Panel is composed of people in higher education associations and people in the field. It is designed to: review and advise the Director on operational policy; select an agency or individual to perform the external evaluation of the project's effectiveness; develop alternative strategies to obtain supplementary funding during the period of the Fund grant, and beyond.

In a similar vein, most decisions to change or not to change are made in response to conditions in the local campus environment. The federal befuddlement about excessive waste from reinvention of the wheel; the tendency to search for the one solution to the exclusion of all others; the complaint about the proliferation of new colleges even while current ones can't survive--these seem to us naive understandings of what motivates people and how change comes about.

People need, to a great extent, to recreate the wheel; there may be many solutions to similar problems because people are so different. Moreover, creating "something new" is often a more practical solution than the slow reform of existing institutions. These are the reasons why the response "it's been done before," or "someone else does that" are not sufficient reasons for scotching an idea. It may need to be done many times again. It is not the duplication of efforts that bothers us as much as the ignorance of others who might be helpful to someone about to duplicate that seems to be the great waste.

ORGANIZATION

Any new program--especially a good idea without a parent--must make decisions about planning, supervisory committees, and affiliation with other entities. Our experience from NEXUS suggests the following:

Planning: First, if a project is new, with yet unknown staff to be hired, it will usually take about six months to pull a staff together to work on it. Proposals (like NEXUS) which leave only three months for recruitment of staff are bound to be behind schedule before any operations have started. It would help a lot if the Fund notified organizations several months in advance of when the project actually begins. In this way, at least the project director might be hired by the start of the grant calendar.

Second, projects of the size and scope of NEXUS really need three years to get off the ground. The first year amounts to a shakedown cruise. Setting up shop, deciding who will be served, finding the right team of staff people, developing taxonomies for information storage, distinguishing what's a referral from information-giving, all take at least a year. The second year is spent in promoting what you do so that those who can benefit will use the service. During both the first and second years of program-building, more brickbats than kudos come your way. It's hard for anyone to evaluate a program during those first two years. And it is only during the third year that the number of people served begins to snowball and brings the cost per unit within sight (but still too high). Three years is a minimum, but achievable, period of time within which to expect a program to meet its objectives, and assess how useful it is to the intended audience.

Advisory Committees: Before the first six months were over, NEXUS had selected and convened an Advisory Panel. Its advice, especially early in the program's life, was crucial to keeping the NEXUS staff attuned to the needs of people in the field. Individual members have been very supportive at key times when help was needed, and their names have lent legitimacy to an unknown operation. But the most important things to remember about an Advisory Panel are these:

-- Clearly spell out your expectations of the group; this will avoid later misunderstandings.

-- Find a few members who, by their reputations, lend credibility to a program.

-- Listen to their advise.

Early on, we were told not to worry about an advisory committee; for lots of reasons, it is well that we did.

Program sponsorship and affiliation; The organization by which a project is sponsored, or with which it affiliates, can be crucial to its success. As a sponsored project of the American Association for Higher Education (AAHE), this was certainly the case with NEXUS. AAHE's credibility in the eyes of supporters and users gave NEXUS an important advantage. Moreover, AAHE was perceived as supportive of the kinds of things which NEXUS was designed to advance. It is probably fair to say that NEXUS would not have made it without AAHE's aegis. The initial legitimacy, connection with innovative people in higher education, and help in getting under way were essential.

As much as possible, the limitations and controls imposed by affiliating with another group should be explored early. The restrictions placed on NEXUS were few, and the assistance was generous and somewhat selfless from the start. That might not have been the case had there been serious conflicts (which there were not) between either the AAHE staff and NEXUS staff or NEXUS and the AAHE Board of Directors.

However, one of the more serious problems which NEXUS confronted as it began to look beyond the Fund grant, was the role of AAHE with respect to financial support for the program.

In its proposal to the Fund, AAHE stated its intention to contribute an increasing share to NEXUS income over the course of the Fund grant:

> A schedule of increasing support from the AAHE should be developed. Consideration to one-quarter funding in the second year of NEXUS and one-half funding in the third year is proposed.

Beyond this, AAHE indicated that it would assist the project director to develop alternative funding mechanisms--through a variety of fee systems and/or AAHE support--so that the project would continue beyond the initial grant period.[1] When the Association's financial picture became bleaker during the period of the grant, the board expected each of the soft money funded programs to stand on their without AAHE financial support.

Boards of trustees or directors have the prerogative to change an organization's priorities. Likewise, they have a responsibility to keep their organization financially healthy. If a project is failing, or if the need to which it

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[1] "Project NEXUS" Proposal to the Fund for Improvement of Postsecondary Education, by the American Association for Higher Education, June 1, 1973, pp. 7-8.

was responding has passed, then it is appropriate to alter or terminate a program. But that is not what concerns us here. Rather it is the shortness of memory of boards, acting in a corporate capacity, which is troubling. Nor is this only an AAHE phenomenon. Many education organizations undertake projects which imply, if not state, that some "maintenance of effort" is expected--though to little avail. In initiating new thrusts, boards (as well as funding agencies) need to consider more thoroughly how their successors are going to pay for them.

STAFFING

Nothing is more critical to the shape and success of a project than the people who work on it. (In stating such an obvious conclusion so early, we recognize the risk of losing the attention of most of our readers. But, even simple truths need to be repeated occasionally.)

Here, briefly, are six conclusions about staffing formed during the first two and a half years of NEXUS operations.

1) Nothing is more critical than the selection of the person responsible for directing a project. Any idea or program is shaped by--and shapes--the people who work most closely on it. Their attitudes, values, energies and interests meld with any proposal, however prescriptive, to mold the eventual outcome. The director, who is responsible for selecting other staff, is your most important selection. Short of some outside, absolute, limits, don't cut short your search for a director. (And don't hire anyone else until you have the director.) Find someone in whom you have confidence.

Once you have found a project director, let that individual incorporate the idea so that it becomes his or her own. If you have selected someone in whom you have confidence (and don't select any other!), you've got to hand over the responsibility for the project. That should not mean abrogating responsibility, but it does mean an almost total shift of responsibility from you to the director.

2) The staffing pattern should reflect the program's objectives. The NEXUS proposal budgeted five staff positions: a director--well-known and broadly knowledgeable of higher education--a researcher, and three secretaries. That plan was modified almost immediately. Why should a project designed to connect innovators to other experienced people need three secretaries and a high-powered, highly visible director? Instead, middle-level people--researchers and information specialists--were engaged to handle the work.

3) Flexibility about staffing is an important asset for a new program. Our staffing pattern was adjusted several times in less than three years; and, we were fortunate that it could be. As noted above, the original staffing pattern was: director, research assistant, three secretaries. Immediately after the director was hired, that changed to two assistants (to handle inquires) and a secretary. But, a funny thing happened--one less experienced, short-term, young employee proved that he could do as good a job as anyone else. Also, student interns--who could use this work experience as part of their education--could contribute a lot if we planned well for them (and, they were less expensive staff members compared to full-time permanent staff).

Toward the end of its first six months, NEXUS needed an information specialist to more systematically contend with the increasing volume of information. So, the staffing pattern was altered again.

A year later, instead of hiring full-time researchers, we decided that half-time staffers would cover the phones. In an employer dream city like Washington, half-timers are available and NEXUS represents one of the more interesting part-time jobs around. Also (certainly not last in our thinking) each produces more than half the work of a full-time employee.[1]

Thus a program, which started out with a very unimaginative staffing pattern, now employs: full-time--1 secretary, 2 researchers (one as information specialist), 1 project assistant (who handles inquiries and assists the director) and 1 director; half-time--1 secretary, 2 researchers; other--2 student interns. In short, we have been able to adjust the staffing to fit the program's functional needs, the area's pool of manpower, and the budget available. This flexibility to shift as program needs dictate has been essential to the success of the project.

4) Flexibility in individual staff responsibilities is also important. Advantages accrued to the program by keeping job descriptions flexible. When NEXUS began, people were hired to do many things--the information specialist also worked on public relations and editing, a researcher recruited and supervised interns, a secretary did some research. As the program has developed, delineations between jobs have occurred as a result of a better understanding of how NEXUS best works, the career/work interests of staff members, and the practical limits on program resources.

There always should be some tension between what individuals are hired to to, and the unanticipated ways in which they and an organization grow. Giving people chances to fail by allowing them to take on new responsibilities which they see as congruent with their own aspirations and a project's mission produces some uncertainty. But the promise has, for us, outweighed the risks. It's more important that people are challenged by what they are doing than that roles and responsibilities be set in stone.

5) Allow time for the training of new staff and interns. In September 1976, we had four people whose principal responsibility was to handle questions--two were full-time and old hands who had been with the project almost since its start, and two were half-time researchers who started in August. John Laster, one of the old-timers, writes: "Training the new people is more important than we realized. It is the first time we've tried to teach someone to do what we have done by the seat of our pants for over 2 1/2 years." We now aim to hire people up to two months before we expect them to carry their full load.

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[1] There are pro's and con's in this type of staffing. The pro's are that often you can find bright people looking for intelligent part-time positions, with whom you can staff the office all day without lapses, and who will produce consistently high quality work (because they are motivated) and more work (because they are single focused, they work harder per hour than does a full-time person). The drawbacks are that you have to do twice as much training, they take longer to learn (even though they learn fast, they are only with you half time), and double the bookkeeping and paperwork must be done (both of which should be very minor).

We're becoming much more conscientious about "passing the baton" and about the new staff's inability to do all the work well at once. In preparing for new staff we have developed special notebooks for all researchers, found structured ways to introduce new people to the alphabet soup of associations and clearinghouses, kept researchers off the phones until they were aware of how to handle inquiries (e.g. not accepting questions on face value, regarding information as confidential, listening more than you talk) and developed an increasingly well-structured training program. This goes for short-term interns as well as for regular staff. While time-consuming, the investment in developing materials and carrying out a training program is well worth it.

6) Prepare for the stress of an experimental program. In our first year's report to the Fund, we said:

> The first year of a project is exciting as well as taxing. Setting up a course and making decisions without precedents sometimes makes one long for the girders of already established procedures--but not for long.

In hindsight, we understated how taxing the first year had been on the staff. We worked intensely, forestalled law school, overextended ourselves, agonized over what now seem like easy decisions. The huge distance between where one is and where one wants to be can be especially frustrating and can veil the real progress that has been made.[1]

The Fund helped foster a support group for project directors, particularly through the annual project director's meeting. But, new project directors need more assistance than they got at these meetings. It would be wise for the Fund, other funders, and experienced innovators to develop ways to prepare people directing new ventures.

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[1] Networks of old Fund project directors--veterans of their own wars--formed at several national meetings. To some extent, most continued to be somewhat embattled, for the experimental nature of the projects funded by the Fund seems to gravitate toward people who often prefer like salmon, to swim against the stream. We shared the first year's fires--uncertainties about what we were supposed to do and how, difficulties surrounding the hiring and firing of new staff, difficulties of saying "no" to those who expected too much of a small project--and all the while each seemed to plow virgin ground.

PROGRESS TOWARD OBJECTIVES

One of the first things which the program staff did in the early months of NEXUS' existence was to develop a statement of objectives and strategies drawing on AAHE's proposal to the Fund. This "Planning Document" (January 20, 1974) identified five major objectives which have been the focus of our efforts since, and have served as the basis for all our previous Fund reports. These objectives are:

1) Establish a system for the collection, storage, and retrieval of information about resources in postsecondary education;

2) Respond to requests and inquiries from people by referring them to resources, both human and physical, which can assist them;

3) Promote an awareness on the part of potential users of the existence of the service;

4) Seek additional means of financial support; and,

5) Explore the development of additional linking mechanisms, and methods to disseminate information about resources.

The following pages describe NEXUS' efforts to respond to these objectives. This section details summary data collected by the program over the past three years, updating earlier reports.

SETTING UP AN INFORMATION SYSTEM

Descriptions of the mechanics of the current information system are contained in previous reports. They won't be repeated here. NEXUS still operates on its initial information system, which is a combination of a McBee card/file folder operation. The initial system was relatively inexpensive and highly flexible, changing often, especially during the first eighteen months. Now, however, after 2 1/2 years, the manual system is too slow and now discriminating enough. We are currently exploring other, more interactive ways, to store and retrieve information.[1]

Based on the NEXUS experience with information collection, storage, and retrieval, a few pointers can be given to newcomers starting an information clearinghouse like ours:

-- Systems should develop out of experienced needs; they should not precede or presume them: An initial, manual system which can be modified continuously is an economical and useful first step. We decided early-on to develop an information taxonomy while at the same time handling inquiries. Every question was logged, and every answer became part of the project's general pool of information. We explored other information systems, looking for one which would

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[1] For those interested, we have outlined the instructions given to "experts" who will help design a new information retrieval system. See Appendix A.

meet our needs (none did), and debated endlessly as to what general categories to develop. NEXUS still operates with a system developed during the first six months when we had only 468 inquiries.

-- Bring on someone early whose responsibility is the maintenance of the information system: It is important that all the staff who will be using an information system be involved in the prescription of its needs, and that the information person understand and then work to turn these needs into procedures. Our information specialist, Bill Anderson, notes: "In the beginning, the importance of maintaining the information was undervalued, which led to problems such as designing materials without consulting the person who was responsible for day-to-day maintenance." Someone should have full responsibility for information storage, in order that everyone else who uses the system can find the information needed to make the most productive referrals of people to people.

-- Store all information centrally: In an information clearinghouse, you want users to receive essentially the same information regardless of to whom they talk. That requires a central information storage and retrieval system. This also requires then that any system be personally interchangable so that different people at different times who ask questions, come up with the same answers. New organizations like NEXUS can do this easier than ongoing organizations which want to establish a new central storage system.

-- Don't underestimate the difficulty of developing an information system: A major part of several people's time was devoted the first year to developing NEXUS' information system. One thing we did right, though unknowingly at the time, was to have two staff members with opposite views about dealing with problems, be responsible for the information system's initial development. That meant many lengthy discussions, and debates (and, at times, determinative decisions from above). But, it made the system much more capable of being responsive to questions asked by different people.

PROMOTING THE SERVICE

In order to inform people of NEXUS services, the program has employed a variety of promotional measures. Among them are:

-- direct mailings of NEXUS brochures;

-- ads in education publications:

-- articles submitted to newsletters, journals, and magazines; and,

-- information sessions at conferences and other meetings.

The table below indicates how people come to call NEXUS. Publicity is the single largest means by which people become aware of NEXUS. The NEXUS brochure, particularly as distributed through direct mailings, is the most effective publicity. Other kinds of publicity consist of articles and ads, developed and placed by the staff. These have been less effective in getting people to use NEXUS.

Table 1
Means by Which Callers
Are Referred to NEXUS

	No.	%
Publicity (incl. brochure)	1697	39
Word of Mouth	1146	26
Previous Use	714	16
Referred by Organization	661	15
Other	137	3

In addition, a number of publications have, of their own initiative, publicized the program. Two of the more noteworthy were short articles in the New York Times and Changing Times, both of which brought an immediate and heavy increase in the volume of inquiries. Articles and ads in education newsletters, journals, and the like, have not resulted in many inquiries.

Probably the single most effective means by which NEXUS is promoted is word-of-mouth. Slightly over a quarter of all callers are referred to NEXUS on the basis of another person's recommendation. Likewise, 15% of NEXUS callers were referred by someone with another organization--frequently, staff of education associations who routinely refer callers to NEXUS when they are unable to respond to a question. Taken together these personal recommendations represent the major means by which people hear about NEXUS.

Finally, as the program has developed, a moderate but increasing proportion of callers have been people who have called NEXUS at least once before. (Some of these have called on several occasions.)

Thus, after 2 1/2 years, a majority of NEXUS inquirers call either after having been referred by someone, or based on their own previous experience with NEXUS. This is, we think, a very healthy sign.

RESPONDING TO INQUIRIES

Since NEXUS began, it has responded to questions however they came, but has encouraged inquiries by telephone. (Our reasons for this are explained in the earlier section on mission.) Staff people first explore the background of the question, helping some callers to better focus their inquiry. Often during this exchange the initial question is modified or discarded for another one. John Laster, one of our researchers, describes some of the frustrations and satisfactions which come from listening to people's questions:

> One of the challenges is clearly to listen to inquirers carefully and not to take the easy route by coming up with quick answers. It's real easy (especially when the phones get busy) to take the questioner at face value, to assume that he and you mean the same thing when you say "X". Sometimes further inquiry is frustrating because what a person started to say made some sense, but once you start asking questions it no longer does so.

Clarifying questions may be the most difficult, and most important, part of the NEXUS operation.[1]

From January 1, 1974 through June 30, 1976, NEXUS received 5,207 inquiries from 4,799 people. The number of people calling increased 35% this year over last:

Time Period	Number of Inquirers
January-June 1974 :	486
July 1974-June 1975:	1,833
July 1975-June 1976:	2,480

Nine out of ten people contacted NEXUS by telephone. (In NEXUS' most recent brochure, we note that mail requests for information will no longer be accepted since people can call toll-free on the 800 line.

1. Where Do Calls Come From?

Most of NEXUS' callers come from east of the Mississippi, with 45% of them from the Middle Atlantic states. (See Appendix B for a detailed breakdown.) While during the period of the Fund's grant there was a slight increase in the proportion of calls from the west, it was rather small.

However, when calls to NEXUS on a state-by-state basis are compared with a ranking of states by total enrollments in postsecondary education, one finds that the distribution of calls is a reflection more of the higher education activity than proximity to NEXUS. As the following table indicates, nine of the top ten states in higher education enrollments are among the top ten states with calls to NEXUS. Florida, absent from our top ten, ranks eleven in NEXUS inquiries.

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[1] This diagnostic function was highlighted in AAHE's proposal to the Fund: "The emphasis of NEXUS will be on the sensitive matching of relevant persons, programs, and information sources...it is much more likely that /an inquirer/ will benefit from a specific recommendation--e.g., that he get in touch with an individual at a nearby institution, or that he ask for a copy of a given report, especially when he has some confidence, on the basis of personal contact, that the person making the suggestion knows his situation and individual needs." This diagnostic function (finding out what the client's problem really is) is crucial to the success of NEXUS

Table 2

State Ranks by Total Enrollment[1]	State Rank by NEXUS Inquiry[2] July 1975-June 1976	State Rank by NEXUS Inquiry[2] Total 1974-1976
1. California	1. New York	1. New York
2. New York	2. Pennsylvania	2. Pennsylvania
3. Texas	3. California	3. California
4. Illinois	4. New Jersey	4. Illinois
5. Pennsylvania	5. Illinois	5. New Jersey
6. Michigan	6. Michigan	6. Ohio
7. Ohio	7. Texas	7. Massachusetts
8. Massachusetts	8. Ohio	8. Texas
9. Florida	9. Massachusetts	9. Michigan
10. New Jersey	10. Wisconsin	10. Missouri

[1] From: Digest of Educational Statistics, 1973, USOE/DHEW, Washington, 1974, p. 68.

[2] Excluding D.C., Maryland, and Virginia calls, many of which are local calls.

2. Who Calls?

NEXUS received calls from many different kinds of people: faculty and foundation people, administrators and legislators. By the third year, 19% of the inquirers were calling for at least the second time. As the following table indicates, most callers were connected with colleges and universities.

Table 3
Inquirers by Position
Jan. 1, 1974 through June 30, 1976

Position	Number	Percent	Percent Increase (decrease) 1975-76 compared to 1974-75
Staff	1,254	27	49
Administrators	904	19	30
Students	743	16	28
Faculty	650	14	33
Service Organizations	419	9	52
Government Employees	324	7	27
Other*	381	8	(8)
Total	4,675		35

*Includes trustees, researchers, foundation, media and miscellaneous personnel. A detailed breakout is contained in Appendix C.

Staff and administrators in postsecondary education institutions comprise almost half of the NEXUS callers. Students and faculty represent 30% of the inquirers. During 1975-76, the 35% increase in the number of people who called can be attributed largely to the greater use by staff people.

Inquirers also come from all types of postsecondary institutions, but primarily from the traditional collegiate sector. Universities use NEXUS most, and the gap between community college and four year college usage is closing.

Table 4
NEXUS Inquiries by Type and Control of Institution

Type	Control: Public		Private		Total	
University	769	(29%)	339	(13%)	1,108	(42%)
University below Doctorate	264	(10%)	229	(9%)	493	(19%)
College	104	(4%)	477	(18%)	581	(22%)
Community College	390	(15%)	55	(2%)	445	(17%)
Total	1,527	(58%)	1,100	(42%)	2,627	(100%)

Only at the four year level do the inquiries from private institutions far exceed those from publicly controlled institutions.

NEXUS continues to provide more service to higher education's private institutions than to the public sector. During the last year, the use of NEXUS by private colleges increased. A year ago, 23% of NEXUS callers came from private institutions; during the last year, 43% were from private colleges and universities.

Table 5
NEXUS Inquiries from Public and Private
Institutions Compared with Public/Private Enrollment

Control	Fall Enrollment (1973)		NEXUS Inquiries 1974-1976 (June)	
Public	7,419,516	(77%)	1,798	(58%)
Private	2,182,607	(23%)	1.278	(42%)
Total	9,602,123	(100%)	3,076	(100%)

It is surprising to find that most of the students that NEXUS serves are from universities, but this is not true for administrators. The following table indicates that calls from administrators are relatively evenly spread across all types of institutions with an emphasis on calls from the college level. This is true of no other position. It may be caused by the greater incidence of administrators at smaller institutions which have fewer middle managers (staff) than do the larger universities.

Table 6
Percentage of NEXUS Inquiries by Size of Institution
Compared to the Students Enrolled and Institutions

Enrollment Level	(1) NEXUS Inquiries FY 75	FY 76	Total*	(2) FTE Students Enrollments[1]	(3) Institutions[2]
Under 500	4%	5%	4%	2%	23%
500-999	11	12	12	4	20
1,000-4,999	30	32	31	24	38
5,000-9,999	17	17	17	20	11
10,000-19,999	21	19	20	23	6
20,000+	18	15	16	27	3

*Total includes January-June 1974 inquiries as well as FY 75-76.

As a comparison of columns 1 and 2 of the table above indicates, 36% of NEXUS postsecondary inquirers are located at institutions of 10,000 students or more, even though institutions of this size represent only 9% of all institutions. In the same vein, while small colleges (1,000 and under) represent 43% of all institutions, inquirers from these colleges represent only 16% of NEXUS postsecondary callers. However, if one compares columns 1 and 3, a different picture emerges. There it is clear that NEXUS is providing a proportionately greater service to smaller institutions. For while only 6% of all students are in institutions of 1,000 and less, 16% of NEXUS callers from postsecondary institutions are from this size institution.

To summarize, then, the characteristics of NEXUS callers are:

-- almost half (46%) are staff or administrators on campuses;

-- two out of every five callers who come from higher education institutions work at universities;

-- faculty represent only 14% of all campus-based people who call;

-- callers are more likely to work in the public sector although NEXUS inquiries from the private sector are almost twice the percentage of students enrolled in private higher education;

-- the majority of the campus-based callers work at medium to large institutions which enroll more than 5,000 students.

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[1] Digest of Education Statistics, 1973, p. 90.

[2] Lloyd C. Oleson, "Report of 1974 Fall Enrollment by Size Categories" based on preliminary data from 1974 Fall Enrollment--Preliminary Data, Nov. 23, 1974, USDHEW.

3. What Did People Ask?

One of the most persistent questions which has been put to NEXUS staffers over the past 2 1/2 years is: what do people ask about? The simplest answer is: just about everything; from the predictable--"Who has developed a remedial writing program?"--to the exotic--"What colleges have been wiped out by a natural disaster?". The ten leading areas in which questions have been put to NEXUS are indicated in the table below.

Table 7
Rank Order of What People Asked
-Total to Date-

	No.	%
Clients	1,907	13
Disciplinary	1,705	11
Instructional/Educational Approaches	1,620	11
Financial Resources	1,200	8
Governance/Management	1,118	7
Format	1,008	7
Learner Support Systems	905	6
Evaluation/Assessment of Individual	795	5
Consumer Information	777	5
Human Resources	629	4

The figures in the table do not indicate the actual number of questions on a particular area, but rather, the frequency with which such areas occur in questions. For example, programs to encourage greater numbers of minority students to enter engineering would be reflected both under "Clients" and "Disciplinary". What the table does indicate, however, is the nature of concerns reflected in questions put to NEXUS.

The table indicates that over the course of two and a half years, questions from NEXUS inquirers relate to some specific clientele grouping in 13% of the cases. Examples of these are: "Where are there programs for women returning to college?" or "Who has a peer counseling program for Veterans?" Right behind "client" questions are those which relate to specific disciplines--e.g. health, business, mathematics--with (11%), and questions which relate to particular instructional/educational approaches--e.g. individualized, applied, interdisciplinary--also at 11%. Many of these disciplinary questions and instructional questions are in tandem, such as "Where is there an individualized approach to the teaching of history?"

During NEXUS two and one half years of operation, a subtle, yet clear shift has taken place in the nature of the questions put to it. Initially, the preponderance of questions was in the realm of experimentation. Callers tended to be concerned with new departures such as external degrees and modular calendars. Gradually, however, the overall thrust of the questions has shifted, from experimentation and innovation, to coping with and managing under new, tighter conditions. NEXUS callers today are more likely to be concerned with tenure alternatives and collective bargaining than with external degrees.

4. How Did NEXUS Respond to Questions?

When NEXUS began, it was seen principally as a network of "innovators" and it was thought that the way to assist people with questions would be to refer them to these innovators. As we have discovered though, what constitutes the right referral depends not only on what people want, but on why. Different reasons for asking questions require different referrals, if the information is to be useful to the one who asks a question. People ask questions because they want: to inform, to persuade, to decide, or to act.

-- To inform: This type of inquiry is usually of a very general nature. Often the inquirer has only an emerging interest in some phenomenon or issue. Usually this kind of question can be responded to by referring the inquirer to a directory or general resource book which can provide resources or basic information.

-- To persuade: Some calls come from people looking for "group support" or precedents to support a proposal or position they are advocating. An illustration: a caller asks where there are colleges similar to his own which give credit for prior nonacademic learning experiences. He or she may be less concerned with who is doing it than that somebody is--and the more the better. At its worst, this becomes an "everybody's doing it" request. NEXUS tries to connect this person with a generalist who tracks institution-wide practices in this area. It is important to keep in mind that the dynamics of change often require pointing to the fact that others have done something without negative consequences. Sometimes, due to the environment or the personalities involved, this information is as important as anything else which can be provided.

-- To decide: A third kind of question comes at the stage at which someone is considering adoption of a policy or program. For example, a dean may be weighing a proposal to implement a nontraditional degree program, with unconventional grading. Before deciding, that dean may want to know of the experiences of other institutions which have adopted such programs. What are the costs? What happens to the students with such a degree? Can they get into graduate school? NEXUS connects this caller with several practitioners with direct experience working out similar questions.

-- To act: Finally, there are those questions which derive from someone's need to talk with another person about how to do something. The inquirer may know what he wants to do, but is uncertain of how to initiate action. In other cases, he or she may be in the midst of some initiative and encounter a snag, perhaps logistical or personnel-wise in nature. For example, an inquirer from a

faculty development center at a college with collective bargaining may be developing an incentive grant program to promote instructional innovation by faculty. Contact with people who have had experience with this kind of program in an institution with collective bargaining is what is required. These callers are given names of other practitioners at institutions who have formal ways of dealing with comparable problems.

After receiving a caller's question, how does the staff dispose of it?

-- To what kinds of resources were inquirers referred?

-- How promptly were questions handled?

Both of these questions are important, since NEXUS describes itself as a "people bank" designed to give timely responses to people's questions.

As the table below indicates, NEXUS refers callers to persons, as opposed to literature, in 82% of the cases. These referrals are either to persons directly involved in a particular program, or to staff members of a clearinghouse, association or network. These proportions have held virtually constant over the course of the program's existence.

Table 8
Types of NEXUS Referrals

NEXUS Referrals	FY 74-76*
People/Programs	44%
Literature	17
Clearinghouses/Networks	38
Other/No Information	2

*Equals more than 100% due to rounding.

Even as the referrals have maintained a distinctly "people" orientation, NEXUS has been able to cut the time in responding to questions. As the following table illustrates, in FY 76 NEXUS responded to 85% of callers' questions within two (2) working days' time, up from 74% in FY 75, and 46% in FY 74 (Jan.-June '74 only).

Table 9
Promptness of NEXUS Response

	FY 74	FY 75	FY 76	Total to Date
Within 2 days	46	74	85	77
Over 2 days	54	26	15	23

FINDING ADDITIONAL SUPPORT

NEXUS survives beyong the Fund grant! During 1976-77, NEXUS received two year grants from the Ford Foundation and the Exxon Education Foundation.

In the course of fund raising, we learned several things about financing an enterprise of this nature:

-- It is time-consuming and will take at least 50% of one person's time in the final grant year.

-- Eighteen months before the money runs out, a concrete proposal or income plans should be circulated.

-- Funders of continuing projects could help project directors during the first year of a multi-year grant to lay concrete plans for post-grant survival.

-- Programs should get clear early on about how much cash the parent organization will provide. We learned in January, 1975 that AAHE probably couldn't provide cash to support NEXUS. We then knew how much was needed to be raised from external sources.

In its first year of operation, NEXUS invested most of its resources in developing a sound base for the program. During that time, fund raising activities were delayed. Gradually, this issue became more central and an increasing amount of staff time--particularly the director's--was invested in identifying funding options, developing proposals, and presenting NEXUS' case to potential funders.

As NEXUS operates now, it is doubtul if installing a subscription fee--one of several early proposals--would have brought in enough income at this time to have been successful. The strategy now is doublefold: increase calls to develop a broad enough base for subscriptions; and seek contracts to coordinate the information clearinghouse needs of other groups.

Eventually, NEXUS will have to be financed primarily through its own income generating services. As NEXUS becomes better known, gains a reputation, and builds a constituency, it will diversify services and charge for some of them. The grants thus far received for the next two years are intended to make the transition from "soft money" more possible, while still maintaining the basic character of the program. Our biggest question mark at the end of the Fund grant is how NEXUS will be financed over the long haul. Fortunately, we have another few months to work that out.

DEVELOPING ADDITIONAL LINKING MECHANISMS

As was noted earlier, NEXUS has not attempted to do all that was suggested in the initial proposal relating to additional linking strategies. However, the program has undertaken a few efforts in this area, two of which deserve mention--the conference linking service and NEXUS' newsletter, NEXUS-To-Date.

The conference linking service actually consists of two or three services designed to fit a particular group's conference needs. Under this service, NEXUS: conducts preconference interviews of all or a sample of prospective conferees to determine needs and interests; compiles an annotated conference directory to inform conferees of the background and interests of fellow conferees; and, conducts an on-site service, which provides for the linking of persons with questions with others at the conference who can assist them. Arranged through a service contract with a group, these services are one way in which NEXUS has already begun to generate income.

NEXUS-to-Date is the program's new newsletter which currently has a circulation of approximately 350 paid subscribers. The newsletter was a belated addition to the NEXUS program. Previously, staff had been reluctant about going into a print mode. However, as the program continued, it became evident that NEXUS needed a means to bring information which might be useful to many people to the attention of practitioners without their having to ask for it.

NEXUS-To-Date provides its readers with concise descriptions of effective programs, and with the names, telephones, and addresses of people associated with the program who can be contacted. Typically, the major article describes the background of a particular type of program, and then cites from four to six individual program descriptions. In addition, NEXUS-To-Date informs its readers of clearinghouses, networks, directories or handbooks of which they would be otherwise unaware.

EVALUATION

AAHE's proposal to the Fund, establishing NEXUS, recognized the need for evaluation:

> We are committed to the notion that NEXUS should be evaluated by both internal and external sources.

Moreover, this was responsive to the Fund's interests in evaluation of its funded projects.

Accordingly, NEXUS has been the subject of both an external evaluation, and an ongoing in-house evaluation effort.

EXTERNAL EVALUATION

In September, 1975, Howard P. Levine, formerly with the Berkeley Center for Research and Development, completed an independent evaluation of NEXUS based on the program's first two years of operation. For the evaluation, he interviewed 133 people who had used NEXUS. A summary of Levine's findings follows.

86.5 percent of those who used NEXUS received some help, and two-thirds received help that probably would not have been available elsewhere. Of these:

-- 6 percent can be considered "paradigm successes" in that NEXUS was critical to the success of their project, i.e. they would not have been otherwise possible.

-- 31.6 percent found it "significantly helpful" (saved much time and money, greatly improved project, etc.).

-- 28.6 percent found it "moderately helpful" (one of several sources of information).

-- 20.3 percent found it "somewhat helpful" (priorities changed).

-- 13.5 percent indicated that they received no help (didn't get leads, didn't contact referrals, didn't get help from referral).

On the other hand, Levine found that NEXUS had been less than effective in disseminating information about itself to potential users. He sent questionnaires to 1,000 people who previously had been mailed a NEXUS brochure outlining its services, but who had not called. Two hundred eighty-five people returned the questionnaire. Of faculty and administrators who were mailed the NEXUS brochure, 47 percent said they had never heard of the program. Many of those who had heard of it said they didn't use the service because they weren't sure how it worked. Of NEXUS clients, 45 percent said they had learned about the program from the brochure. Since NEXUS had received 1,332 calls for help by April, 1975, and since about 100,000 brochures had been mailed describing the program, the response rate to the brochures was a mere 0.6 percent. He concluded that for a free service, that is not much of a response, and that clearly some improvement was needed in informing people about NEXUS.

"Ripple Effect" of NEXUS Referrals

According to Levine, NEXUS has been impressive getting information to its users, and through them to others. In almost every case, NEXUS was able to make at least one referral to a client, and 86 percent of the clients got in touch with the referral. Of that group, 50 percent received leads on additional resources from the initial referral, producing a ripple effect, and 29 percent got back in touch with the referral on another occasion, indicating that these clients clearly considered the referral a valuable resource. Another ripple effect occured with respect to the information itself. In some sense practically all NEXUS clients disseminate the information they get through NEXUS, but a surprising 27 percent had definite channels for the information, ranging from passing it along to another individual to sharing it with a committee or even an entire state system of institutions.

Levine found that NEXUS is probably most valuable as a referral service for people who are about to introduce new programs on their campuses or change existing programs. Over 35 percent of the clients were committed to action themselves and were put in touch with people already running programs similar to their own. He noted that this type of people-to-people linkage is both needed and generally not available from other sources. Many clients in this category stated that their NEXUS contacts saved them much time and money in establishing their programs.

On the basis of this evidence, Levine concluded: "NEXUS is doing an excellent job in helping its clients solve their problems."

INTERNAL EVALUATION

User feedback has been a continuing NEXUS concern. In order to respond to this need, the staff has employed a "Talkback" questionnaire. Sent to recent users, this simple instrument seeks to determine whether the inquirer has received the information requested. Initially the Talkback was sent to virtually all users. Now, with repetition of questions attendant to greater volume, it is employed when the question and/or the referrals are new to NEXUS. Approximately 90% of those receiving "Talkbacks" respond affirmatively. Negative responses are, in turn, followed up by the NEXUS director to determine the problem and propose alternate assistance.

During the summer of 1976, Jackie Byrd, a doctoral candidate in the Department of Education Administration at the University of Minnesota, spent two months as a NEXUS intern, focusing on an evaluation of NEXUS. Byrd interviewed, by telephone, eighty people who had called NEXUS between September, 1975 and March, 1976. Her principal findings were these:

-- 90% (72) of the callers contacted the resources that NEXUS gave them, and 97% said they would call NEXUS again.

-- Seven out of ten surveyed said the information was useful, and 19% of those who answered said they could not have done without it.

-- Administrators and staff members at colleges found the information that NEXUS gave them to be more useful than faculty, students, or others who called.

-- People from the smaller colleges were more likely to say they could not have done without the information provided by NEXUS than were those from larger schools.

-- One out of three (36%) callers had implemented the program about which they called, with staff most likely to implement and faculty least.

-- Of the 21 people (28%) who answered who said the information wasn't useful, most (41%) said the information provided wasn't applicable. These tended to be students and persons associated with education-related agencies.

-- Most people who called NEXUS had tried to find information from other sources beforehand. Half had already scanned the literature and talked to other people, with faculty and staff most likely to have done so and administrators least likely to have.

-- Most inquirers (three out of four) shared the information with someone else: administrators, a campus committee, faculty, staff or students. Administrators were the most likely secondary recipients of the NEXUS information. (Almost half of the information provided by NEXUS is shared with administrators, even though they represent only 19% of NEXUS callers, and 17% of the survey sample.)

Byrd recommended that the project reassess its service to students, faculty and others to see whether more participation by them is desired, that it look at three areas in which many inquirers were dissatisfied with the information given, that old referral resources be rechecked for continued accuracy, and that the usefulness of NEXUS "Quick Sheets" be reassessed.

CONCLUSIONS

For years, critics have pointed to the ineffectiveness of dissemination in education. Research and development initiatives often have little impact on the field for which they were designed. New developments seem to take forever to become known and tried by others. Even if disposed to try new methods or approaches, there seem to be few if any means of finding others who, having tried before, could offer clues or hints based on their successes or failures. NEXUS was established to respond to this condition. Now, after almost three years and $308,000, what can we conclude?

First of all, NEXUS saves people time and money. This message comes through clearly, both in the Levine and Byrd evaluations, as well as numerous comments on NEXUS' Talkback questionnaires to users.

Second, while it is difficult, if not impossible, to assess the real impact of NEXUS on postsecondary education, it is apparent that in a number of cases--what Levine calls "paradigm successes"--NEXUS has meant the difference between a program's coming into existence or not.

Third, the distinctly personal nature of NEXUS has been of critical importance. If there has been one thing which stands out in evaluative comments, it is that NEXUS users genuinely appreciate the people-to-people character of the program. As Jackie Byrd, this year's evaluator, said, "They /users/ keep mentioning that they are so pleased that they find people who care about them when they call." Perhaps that's something to keep in mind, that our concerns for them and for their problems is what helps distinguish NEXUS from other dissemination strategies.

But what is it about NEXUS that has made it work? Why has NEXUS, in less than three years since it was started with a Fund grant, found such an acceptance? What is it about NEXUS that wasn't there before it was launched? We can pose some hypotheses, but they will only be that, for it should be remembered that we speak from our impressions rather than from data.

To the extent that one can say that NEXUS has worked (succeeded), several factors are responsible, exclusive of the program's service to its callers.[1]

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[1] From the beginning, NEXUS was perceived, particularly by the staff, as an experiment. That is, it might fail or succeed, and we needed to temper our hopes for the program with a healthy dose of skepticism as to whether or not the program was operationally and financially feasible. In fact, it was not until the spring of 1976 that individual staff members who had been most closely associated with the program came to the conclusion that NEXUS did, indeed, deserve to continue, that it was performing a valuable service to higher education. Ironically, that conviction came less from the data that was gathered than from the wellspring of support for the program that emerged from so many people, most of whom were little-remembered by the staff, who had called NEXUS during the previous two years. Earlier, at times, we felt alone in our battle for existence, and so we questioned whether or not indeed NEXUS ought to continue. It became much easier when others, unasked, were willing to describe to others their experiences with the NEXUS service.

State of Postsecondary Education

While NEXUS was a child of the period of innovation and experimentation, it was raised during the more pressing years of "steady state" and accountability. Thus, while it was originally perceived as an aid to "innovators"--a small constituency at best--it has been used far more by a wider body of people--particularly college and university administrators and staff--to cope with and adjust to conditions of fewer resources, decreasing institutional flexibility and greater public scrutiny. Thus, while NEXUS was originally perceived as promoting "innovators" and experimentation, it has functioned more as an aid in responding to new problems and conditions (as well as to many perennial ones).

Dissemination Agenda

Due partly to the conditions noted above, and partly to the size of the cumulative federal, state and private investment in R&D, more and more attention became focused on dissemination in postsecondary education. While dissemination was always important, the need for more effective practice in postsecondary education was heightened by the onset of a period of scarce resources. Likewise, the interest of federal agencies and foundations in getting "more bang for the buck," has resulted in greater attention to dissemination strategies at the national level. For example, the National Institute of Education has added significantly, both in dollars and rhetoric, to its dissemination program. Through its "Impact" program, the Exxon Education Foundation has sought to promote the dissemination of the results of some of its previous grantees in higher education. Moreover, NEXUS represented a new twist to dissemination in postsecondary education--personalized, over-the-phone assistance to people and programs--rather than another agency with a focus on research or literature.

A New Agency

The idea for NEXUS had been circulating for a few years, but it remained for a new agency--perhaps more willing to take risks--to support it. The initial three year, $308,000 grant from the Fund represented the kind of "risk capital" without which NEXUS would have remained only another interesting idea.

Collegiality

While NEXUS is the point of contact, what makes it viable is the network of people in postsecondary education--NEXUS referral resources--who generously assist others with questions or problems: the scores of faculty, staff, administrators, association personnel, researchers, and others who help NEXUS callers without regard for remuneration. Of the hundreds of people whom NEXUS has contacted, few have asked when they could "start the meter running."[1]

Assistance to NEXUS Per Se

In addition to those people who have helped NEXUS' callers are the individuals who have aided and promoted the program, and provided moral support to the

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[1]The original proposal and plans for NEXUS had provided for a group of 10-12 network contributors who would be remunerated. Concern was expressed during the first few months that NEXUS needed to offer some incentive or inducement for people who would agree to be referrals in the NEXUS network. We found that this concern was unnecessary.

staff. Two people are responsible for conceiving the idea of NEXUS: JB lon Hefferlin and Ellis Phillips.[1] Some--such as Morris Keeton, Bud Hodgkinson, and Dyck Vermilye--provided the early conceptual work leading to the grant. Others--particularly the NEXUS Advisory Panel[2]--provided critical, early advice in launching the program and seeing it through the uncertainties of the first year. Still others, not associated directly with AAHE--such as Stephen Bailey, or Sam Halperin--by their support and promotion of what NEXUS was doing, provided not only legitimacy in the eyes of others, but also moral support to the staff. Finally, there are those--Pat Cross, Dyck Vermilye, Carol Stoel and Russ Edgerton of the Fund--who have been with us practically every step of the way encouraging and prodding us. To these and many others our debt is great.

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[1] See: Ellis Phillips and JB lon Hefferlin, Information Services for Academic Administration (San Francisco: Jossey-Bass, 1971).

[2] See Appendix D for names of Advisory Panelists.

APPENDICES I

The essential elements of the system are that it should be:

1. Fast: Appropriate leads should be identified within minutes.

2. Discriminating: It should be able to make finer distinctions between holdings than does our current system.

3. Capable of cross-indexing information.

4. Moderate in cost.

5. Not dehumanizing -- either for entries within it or for staff people who use it. We don't want staff to become extensions of the machine: rather the technology should assist staff to think more carefully and creatively, and broaden the information base from which referrals are made.

6. Easy to learn: No more than one hour should be required to teach people how to sort through the information base.

7. "Pore-throughable:" that is, it must have a browsing capacity. Often we find that although a person or program may be indexed under other areas, the person would have certain skills to help out someone who is asking a question in an entirely different subject area.

8. Correctable: It must be easy to correct, update, insert, and delete information. Corrections should be made by any staff member at the time they need to be made.

9. Substitutable and serviceable: In case of breakdown, NEXUS will not close until the hardware is fixed. There needs to be an alternate method of accessing information and fast service when the hardware doesn't work.

10. Capable of remote access either from various NEXUS offices or from stations geographically remote from our current offices.

The following are characteristics of the new information system which would be nice but are not absolutely essential:

1. Ability to print out the information: This would help to make quick sheets and provide records of transactions for future subscribers.

2. Memory: When the track we've chosen to pursue is wrong or empty, we should be able to go back to a previous list and select another path.

3. Ability to process more than one transaction at a time: When telephones are busy, we should not have to wait in line.

4. Central listing of all entries.

5. Saving of staff paperwork time: If staff could punch in the name and address of a person during the transaction, this might then be coded and sent directly to our data processor for summary and normative statistics.

6. Merger capability with other USOE, etc. tapes which provide data about higher education's institutions.

APPENDIX I-B

NEXUS INQUIRIES BY REGION

Regions 1/	FY 74 Jan-June 1974 No.	%	FY 75 July 1974-June 1975 No.	%	FY 76 July 1975-June 1976 No.	%	TOTAL-TO-DATE (6/30/76) No.	%
New England	36	(7.8)	137	(7.6)	150	(6.1)	330	(7.0)
North Atlantic	221	(47.9)	791	(44.2)	1117	(45.4)	2127	(45.1)
Northern Midwest	67	(14.5)	230	(12.8)	340	(13.8)	633	(13.4)
Southeast	58	(12.6)	282	(15.7)	360	(14.6)	700	(14.8)
Central	39	(8.5)	125	(7.0)	172	(7.0)	342	(7.2)
Southwest	14	(3.0)	89	(5.0)	100	(4.1)	203	(4.3)
Mountain	--	(0)	25	(1.4)	53	(2.2)	76	(1.6)
Pacific	26	(5.6)	112	(6.3)	171	(6.9)	310	(6.6)

1. New England: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.
North Atlantic: Delaware, District of Columbia, Maryland, New Jersey, New York, Pennsylvania.
Northern Midwest: Illinois, Indiana, Michigan, Ohio, Wisconsin.
Southeast: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, West Virginia.
Central States: Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota.
Southwest: Arizona, New Mexico, Oklahoma, Texas.
Mountain States: Colorado, Idaho, Montana, Nevada, Utah, Wyoming.
Pacific States: Alaska, California, Hawaii, Oregon, Washington.

APPENDIX I-C

Inquirers by Position--
Quarterly FY 74, FY 75, FY 76, Total-To-Date

	FY 74				FY 75								FY 76									
	3rd Qt.		4th Qt.		1st Qt.		2nd Qt.		3rd Qt.		4th Qt.		1st Qt.		2nd Qt.		3rd Qt.		4th Qt.		TOTAL	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Dept. Chairperson	*	-	*	-	4	1.7	6	1.3	2	0.4	8	1.6	7	1.7	19	3.1	14	1.6	3	1.6	73	1.6
Faculty, General	21	10.2	39	14.6	20	8.5	61	13.2	46	8.2	52	10.6	37	9.1	60	9.9	82	9.6	45	9.2	473	10.1
Faculty, Educ.	*	-	*	-	4	1.7	16	3.5	19	3.4	3	0.6	9	2.2	16	2.6	14	1.6	6	1.2	104	2.2
Student, Enrolled	10	4.9	20	7.5	16	6.8	35	7.6	61	10.8	43	8.4	26	6.4	47	7.7	56	6.5	32	6.5	350	7.5
" Potential	*	-	*	-	15	6.4	15	3.2	26	4.6	94	18.4	54	13.3	37	6.1	95	11.1	41	8.4	393	8.4
Administration	84	40.8	74	27.7	63	26.7	118	25.5	93	16.5	42	8.2	74	18.2	117	19.2	164	19.1	59	12.1	904	19.3
Staff	29	14.1	57	21.4	48	20.3	126	27.3	145	25.7	147	28.8	99	24.4	193	31.7	234	27.3	162	33.1	1.254	26.8
Trustees	*	-	*	-	3	1.3	2	0.4	1	0.2	1	0.2	0	0	2	.3	1	.1	0	0	11	0.2
State/Local Govt.	*	-	*	-	7	3.0	13	2.8	30	5.3	26	5.1	25	6.2	23	3.8	27	3.1	18	3.7	185	4.0
Federal Govt.	9	4.4	10	3.8	8	3.4	12	2.6	20	3.6	12	2.3	8	2.0	12	2.0	23	2.7	24	4.9	139	3.0
Service Org.-Ed.	12	5.8	25	9.4	12	5.1	21	4.6	59	10.5	35	6.9	30	7.4	45	7.4	58	6.8	42	8.6	340	7.3
" " Non-Educ.	*	-	*	-	2	0.8	4	0.8	9	1.6	7	1.4	8	2.0	11	1.8	15	1.7	16	3.3	79	1.7
Researcher	*	-	*	-	11	4.7	12	2.6	13	2.3	5	1.0	5	1.2	3	.5	7	.8	4	0.8	71	1.5
Philanthropic	3	1.5	1	0.4	3	1.3	-	-	6	1.1	1	0.2	3	.7	1	.2	4	.5	1	.2	23	.5
Commercial	*	-	*	-	14	5.9	11	2.4	22	3.9	22	4.3	10	2.5	13	2.1	37	4.3	15	3.1	155	3.3
Media	*	-	*	-	4	1.7	4	0.8	8	1.4	4	0.8	8	2.0	4	.7	10	1.2	8	1.6	55	1.2
Other	38	18.5	41	15.4	2	0.8	6	1.3	4	0.7	9	1.8	3	.7	5	.8	17	2.0	13	2.7	66	1.4
Total	206	100.2	267	100.2	236	100.1	462	99.9	564	100.2	511	100.2	406	100	608	99.9	858	100.0	489	101.0	4,675	100.0

*Data not collected separately

APPENDIX I-D

NEXUS Advisory Panel
(1974-77)

	Terms
Mrs. Stephen K. Bailey (Cornelia W.) College and University Personnel Association One Dupont Circle Washington, D.C. 20036	(1974-75)
Neal R. Berte, President Birmingham Southern College Birmingham, Alabama 35204	(1974-77)
Zelda Gamson Center For The Study of Higher Education University of Michigan Ann Arbor, Michigan 48104	(1974-77)
John Harris Tennessee Higher Education Commission 908 Andrew Jackson State Office Building Nashville, Tennessee 37219	(1974-77)
Elden Jacobson Association of American Colleges 1818 R Street NW Washington, D.C. 20009	(1974-75)
Morris Keeton, Provost & Vice President Antioch College American City Building, Suite 403 Columbia, Maryland 21044	(1974-77)
Richard Millard, Director Higher Education Services Education Commission of the States 300 Lincoln Tower 1860 Lincoln Street Denver, Colorado 80203	(1975-77)
Ellis Phillips, President Ithaca College Ithaca, New York 14850	(1974-75)
Sister Joel Read, President Alverno College 3401 South 39th Street Milwaukee, Wisconsin 53215	(1975-77)
Nancy K. Schlossberg American Council on Education One Dupont Circle NW Washington, D. C. 20036	(1974-75)

	Terms
William Shannon, Vice President American Association of Community and Junior Colleges One Dupont Circle Washington, D. C. 20036	(1974-76)
Margaret A. Talburtt Formative Evaluation Research Associates 1130 Hill Street Ann Arbor, Michigan 48104	(1975-77)
Barbara S. Uehling, Provost University of Oklahoma Norman, Oklahoma 73069	(1975-77)

APPENDICES II

The NEXUS account was audited for the fiscal years 1974, 1975, and 1976, as part of the overall audit of the American Association for Higher Education (AAHE) by Lee, Hendricks and Company, Certified Public Accountants, Washington, D.C. The following pages represent those sections of the overall AAHE audit relevant to NEXUS, for each of those years.

Lee, Hendricks & Co.

CERTIFIED PUBLIC ACCOUNTANTS

VINTON LEE (1937-1969)
LEON R. HENDRICKS

1025 VERMONT AVENUE, N. W.
WASHINGTON, D. C. 20005
(202) 347-9494

7411 RIGGS ROAD
HYATTSVILLE, MARYLAND 20783
(301) 445-1700

Board of Directors
American Association for Higher Education
One Dupont Circle
Washington, D. C.

Gentlemen:

We have examined the Balance Sheet of the American Association for Higher Education as of June 30, 1974, and the related Statement of Revenues and Expenditures for the fiscal year then ended. Our examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying Balance Sheet and related Statement of Revenues and Expenditures present fairly the financial position of the American Association for Higher Education at June 30, 1974, and the results of its operations for the fiscal year then ended, in conformity with accounting practices for non-profit organizations, applied on a consistent basis.

LEE, HENDRICKS & CO.

Lee, Hendricks & Co.

Certified Public Accountants

Washington, D. C.
September 30, 1974

Schedule B-9

NEXUS

Salaries and Wages	$ 38,500.54	$ 61,555.00	$(23,054.46)
Payroll Taxes	2,528.14	2,575.00	(46.86)
Fringe Benefits	1,311.50	5,150.00	(3,838.50)
Part Time Help	1,486.91	2,500.00	(1,013.09)
Rent	-	2,000.00	(2,000.00)
Office Supplies	2,632.88	3,200.00	(567.12)
Telephone	7,138.81	6,000.00	1,138.81
Postage and Distribution	399.44	2,500.00	(2,100.56)
Printing and Duplication	4,644.16	1,500.00	3,144.16
Travel	4,785.03	12,000.00	(7,214.97)
Entertainment	47.47	300.00	(252.53)
Professional Fees	666.50	7,000.00	(6,333.50)
Advertising	64.09	-	64.09
Consultant Travel	155.56	7,500.00	(7,344.44)
Advisory Board	510.15	1,800.00	(1,289.85)
Promotion	223.50	1,000.00	(776.50)
Reference Materials	382.90	500.00	(117.10)
Furniture and Fixtures	3,975.00	5,800.00	(1,825.00)
Total	$ 69,452.58	$122,880.00	$(53,427.42)

Lee, Hendricks & Co.

CERTIFIED PUBLIC ACCOUNTANTS

VINTON LEE (1937-1969)
LEON R. HENDRICKS

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WASHINGTON, D. C. 20005
(202) 347-9494

7411 RIGGS ROAD
HYATTSVILLE, MARYLAND 20783
(301) 445-1700

Board of Directors
American Association for Higher Education
One Dupont Circle
Washington, D. C.

Gentlemen:

We have examined the Balance Sheets of the American Association for Higher Education as of June 30, 1976 and 1975, and the related Statements of Income and Expenses and of Changes in Fund Balances for the years then ended. Our examinations were made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying financial statements present fairly the financial position of the American Association for Higher Education at June 30, 1976 and 1975, and the results of its operations and changes in fund balances for the years then ended, in conformity with generally accepted accounting principles consistently applied.

LEE, HENDRICKS & CO.

Lee, Hendricks & Co.

Certified Public Accountants

Washington, D. C.
August 4, 1976

American Association for Higher Education
Washington, D. C.

STATEMENT OF REVENUE
GENERAL FUND

	Year Ended June 30, 1976 Actual	1976 Budget	1975 Actual
Revenues:			
Dues - Regular	$205,156	$238,750	$175,285
- Life	5,107	5,000	4,125
- Other	11,546	12,685	12,278
	$221,809	$256,435	$191,688
Conference - Registration	$ 73,590	$ 73,000	$ 72,699
- Exhibits	7,480	6,000	4,105
- Audio Tapes	1,690	1,500	1,400
- Grants	6,972		
	$ 89,732	$ 80,500	$ 78,204
Publications:			
College and University Bulletin	$ 5,874	$ 5,600	$ 5,014
Current Issues	5,621	6,500	5,591
Free University Directory	28		471
Shared Authority	304	800	1,313
Literature on Higher Education	168	800	1,227
Research Currents	1,507	1,700	1,882
Free University Report	265	450	657
Research Reports	53,289	52,000	55,868
Royalties	1,591	1,500	1,307
Miscellaneous Publications	13	150	168
	$ 68,660	$ 69,500	$ 73,498
Cooperative Program	$ -	$ -	$ 33,092
Regional Programs:			
Kellogg Support	$ 28,000	$ 28,000	$ 45,645
Conference Registration (AAHE)	187		6,468
Member Initiated Conferences	2,992	2,000	14,017
AAHE/KSU Conference Series			1,575
Audi/Visual Tapes	65	500	664
Faculty Seminars	75		42,295
	$ 31,319	$ 30,500	$110,664
NEXUS:			
Grant	$114,537	$114,485	$108,403
Grant Administration	9,305	9,160	8,056
Servicemen's Opportunity College	1,491	4,400	
Contracts	2,844	2,000	
Publications and Other	2,332		
	$130,509	$130,045	$116,459
Other Income:			
Interest Income	$ 5,164	$ 6,000	$ 8,707
Sales of Mailing Lists	3,899	3,500	3,009
Miscellaneous Income	508	300	1,307
	$ 9,571	$ 9,800	$ 13,023
Total Revenues	$551,600	$576,780	$616,628

EXHIBIT F
(4)

STATEMENT OF EXPENSES
GENERAL FUND

	Year Ended June 30, 1976		1975
	Actual	Budget	Actual
NEXUS			
Salaries and Wages	$ 67,958	$ 68,750	$ 60,432
Payroll Taxes	4,120	3,440	3,236
Fringe Benefits	2,674	2,750	2,112
Part Time Help	2,838		3,133
Rent	7,626	7,680	5,400
Office Supplies	993	1,500	2,692
Telephone	8,860	15,000	11,882
Postage and Distribution	1,063	1,500	627
Printing and Duplication	9,950	5,000	4,365
Travel	1,647	4,000	2,920
Entertainment	118	300	66
Professional Fees	5,868	6,000	2,507
Advisory Board	696		921
Promotion	392	2,000	6
Reference Materials	389	500	423
Miscellaneous	40		
Total	$115,232	$118,420	$100,716
Total All Expenses	$558,982	$576,780	$671,696